Indigenous Views on the Terms of Participation in the Development of Biodiversity Conservation in Nepal

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Development's curiosity with indigenous knowledge reflects perhaps the contemporary global consumer vogue for all things indigenous. While the mobile phone was the most popular gift in the U.K. for the last Christmas of the twentieth century, other popularly exchanged gifts were CDs of 'authentic' local musics from Cuba and South Africa, along with more hybrid compositions drawing on African (even 'Afro-Celtic') and Asian cultural sources. The authentic appeals of the sounds of local cultures compete with the global techno-pulse of the millennial moment. This chapter questions development's ability to follow the music industry and appropriate and consume indigenous knowledge in its appetite for new techno-ethno directions. It attempts to unpack some of the reifying consequences that can accompany seeing indigenous practice and discourse as a useful knowledge resource.

Although I argue that the terms 'indigenous' and 'knowledge' need critical qualification, it is not my intention to be dismissive of the potential for development to learn from local skills and distinctive cultural practice. Rather, I identify how a genuinely anthropological approach to knowledge-participation can involve a challenging engagement with indigenous notions of identity, power and agency, that problematises the terms of development participation. The results might be uncomfortable for those who assume an easier project cycle choreographed to indigenous rhythms, as conflicts and contradictions are exposed that cannot effectively be ignored. How realistic is it, for instance, to extol oral knowledge in a context where modern education has become a widely promoted social goal, and village-based knowledge is structurally deprecated as

backward (Pigg 1992)? Examples of problematic participation are discussed from research on conservation issues in north-central Nepal.

What is Indigenous Knowledge?

There are four main features of the indigenous knowledge approach identified here. Firstly, 'indigenous' need not convey the idea of a bounded, culturally specific set of coherently ordered ideas, practices and relations. It is important to work with an idea of culture that can attend to people's capacities for engaging with a diversity of truth-claiming dialogues, and to their learning processes that incorporate new skills, technologies and information[1]. Secondly, although 'indigenous' can carry connotations of 'native' or 'autochthonous', these are perhaps unnecessarily limiting of the range of groups to which the term can apply. Place rather than time - i.e. a locality-based knowledge - is a more useful grounding concept that avoids claims of residential anteriority (however politically salient these may be in some places). Thirdly, 'knowledge' may be both different from scholastic expectations of logical reflection, and greater in scope than the more 'common sense' reductions of utilitarian 'ethno-science' that do not account for symbolic cosmologies and specialist knowledges, such as of ritual practitioners. And fourthly, 'indigenous knowledge' should include practices of living that entail particular interpersonal relationships of dwelling in environments and in communities. Much subsistence know-how concerns social issues of effective group activity (i.e. participation) in coordinating and negotiating labour, residential dynamics, and gender relations, as much as it has to do with 'technical' processes and resources.

The conceptual genealogy that has generated today's coupling of the indigenous with development can be traced back through other sets of terms with different mutual relations. The primitive versus the scientific, and the traditional versus the modern are

[1] Incorporating novel elements into enhanced repertoires of indigenous practice in West Africa has been excellently discussed by Richards in terms of 'creolization' (1996). The argument in this paper is rather for the ability of indigenous knowledge systems to recognise and live with different ways of knowing.

clear categorical oppositions with divergent trajectories, whereas the possibility of collaborative engagement between indigenous knowledge and development objectives suggests a blurring of distinction. There are, however, persistent contrasts commonly associated with 'the indigenous' which the term indigenous cannot itself fully express when coupled to development. Among these are, for instance, the contrasts between oral as opposed to literate cultures, between minority as opposed to dominant national ethnicities, and between livelihoods based on regional natural-resource provision as opposed to global resource circulation. Although in practice many anthropologists may be working with minority, oral, subsistence societies, the term 'indigenous' can be equally applied to literate, cash-oriented elites.[2] In strategies of ethnographic writing though, 'indigenous' is most often employed as a contrastive device, and the effects of contrast demand evaluation. 'Indigenous' is far from being a coherent analytical and comparative label in anthropology, referring to very different social realities and colonial histories when applied to continents like Asia in contrast to America or Australia (Beteille 1998, Bowen 2000).

In the context of post-colonial societies with several decades of green revolution involvement the term 'indigenous' has to convey something of the reality of hybridity between local and introduced technologies and understandings, rather than an uncontaminated, original authenticity. Akhil Gupta neatly expresses the contemporary ethnographic circumspection about identifying a distinctive indigenous terrain:

> "One way to mobilize discourses of indigenous knowledge in analyzing the agricultural practices of the farmers of Alipur would have been to emphasize the use of humoral agronomy and substantivist theories. Yet this mode of analysis could not have accounted for the use of industrial inputs, the commingling of humoral accounts

[2] In his study of the origins of colonial scientific forestry in India, the historian Richard Grove makes reference to the incorporation of indigenous models of forest protection into colonial policy. By this term he means nothing more than 'of Indian origin', as it is the punitive conservation regulations of certain Maharajas he refers to (Grove 1994).

with bioscientific ones, or the manner in which development programs shaped farmers' agricultural decisions" (Gupta 1998: 20).

For Gupta, it is hybridity rather than a dubiously nostalgic indigenousness that is a more empowering starting point for discussing the experience of the poor, the subaltern, and the marginal in South Asia. But is it necessary to argue that contexts of development intervention have brought hybrid worlds into being? Could not hybridity and mixture of rationalities be characteristic of communities less radically transformed in their eco-agronomic habits than Gupta's farmers in North India? In other words although from a post-colonial perspective the image of the indigenous appears as a coherent original tradition, there is a danger that change and diversity are thereby excluded from having a place, suggesting a static and homogeneous culture preceding development's intervention.

Himalayan Hybridity

Despite representations of land-locked, otherworldly remoteness, the Himalaya has been a region of internal and external cultural traffic, an intra-continental zone of encounters and crossings. Nepal's historical position as the hub of trans-Himalayan communication was, though, seriously diminished in the previous two centuries. First by the nineteenth century Rana regime's policy of protective seclusion from British India. Second by the opening of the trade route from Calcutta direct to Lhasa via Sikkim after 1904, circumventing Kathmandu (Van Spengen 1999). And third, by China's occupation of Tibet in 1959.

Within Nepal, settlements distributed across wide altitudinal ranges have accentuated micro-differentiation of language, identity, and cultural practice to produce, with the further amplification of caste ideology, a baroque appearance of cultural

diversity. The question of who are the indigenous people is not easy to answer. The idea of trying to pin down rigorous criteria for defining group A as indigenous while group B as not would be a pointless task, which in the South Asian context recalls the colonial obsession with classifying and ranking castes and tribes (Bayly 1999). Virtually all the population of Nepal claim to be descended from migrants.[3] Linguistic analysis and textual chronicles date the arrival of most of the population (both Indo-Aryan and Tibeto-Burman speakers) within the current borders of Nepal at around a thousand years ago.

Under the Panchayat system of one-party control through the monarchy (1959-90) ethnic difference was not allowed to be mobilised for political goals, being seen as counter to the promotion of national integrity. In the last ten years, since multi-party democracy has been re-established, assertions of historical exploitation and indigenous priority by the Tibeto-Burman speaking groups have been disputed by dominant Nepali speakers, who themselves migrated in phases from parts of present-day India. But historico-mythical pasts are now being reconfigured with an eye to contemporary strategies of collective advancement and alliance formation, such as the *Janajati* federation of minorities. Claims to indigeneity look different if regions and districts are focused on, rather than considering the entire nation. The regional perspective brings out instead the history of political expansion and state formation by the dominant Nepali *Parbatiya* ethnic group since the eighteenth century. The discourse of indigenous rights has entered into Nepalese politics as a challenge to official history and the hierarchical incorporation of ethnic diversity under the caste-ordered Hindu state. While much of the organised 'indigenous' movement in Nepal is an urban and migrant phenomenon, in regionally disparate localities such as the one discussed here, significant local identities give form to differences in knowledges that are brought to bear on development processes.

[3] A rare exception are the Chepang (Rai 1985:2).

Indigenous Knowledge in Development in Nepal

Nepal opened up to development from the 1950s. For about twenty years, between the late 1960s to late 1980s, development was predominantly concerned with addressing a population growth of over 2% per annum and its environmental consequences (Blaikie *et al.* 1980). Rapid deforestation by 'ignorant and fecund' peasants to make precariously terraced fields on unsuitable mountainsides was perceived as leading to disastrous soil erosion, producing massive downstream flooding and the silting up of the Bay of Bengal. This environmental crisis narrative was slowly challenged by studies that questioned the assumption of peasant ignorance as the primary cause of Himalayan environmental degradation (Ives and Messerli 1989). Not only were techniques of indigenous terrace construction re-evaluated as in fact sensibly angled for surface water run-off (Johnson *et al.* 1982), but historical research redistributed the blame for deforestation to include the state elite's construction of huge stucco palaces modelled on Versailles, and politicians' use of forests as bankable assets (Mahat *et al.* 1986).

While specialists in soil mechanics were confounded by the soundness of indigenous cultivation techniques and landslide management (Smadja 1992), Farming Systems Research in Nepal furthered appreciation of Himalayan villagers' risk-spreading practices of vertical agriculture and pastoralism, and their interest in incorporating new varieties into complexly evolving cropping regimes. Studies of local agronomic history demonstrated the ability of even relatively remote communities to intensify and diversify agronomically (Blamont 1986). Whether such processes could be said to belong to an indigenous agriculture was, though, questioned by the French anthropologist Philippe Sagant (1976), who argued that since the eighteenth century Nepal had developed a nationally uniform agricultural system of highland and lowland practices and technologies, with virtually no note of agronomic difference attributable to 'ethnic particularism'. Other comparative studies confirmed the view that there is "no ethnic specific agriculture" in Nepal (Schroeder 1985:35) while continuing to use the term 'indigenous' as a synonym for 'subsistence'. Leaving aside the issue of which people and

which livelihood practices can be argued as 'indigenous', a recent trend among research institutions has been to focus on local agronomic particularity, such as through *in situ* seed varietal maintenance, and participatory plant breeding attending to culinary preferences for local, culturally valued strains of crop varieties (Partap and Sthapit 1998).

In regard to the forests, the move from nationalised control to community forestry spread through the 1980s. In the 1970s Fürer-Haimendorf had remarked on the destruction of Sherpa indigenous resource management systems first by forest nationalisation and later by the Sagarmatha National Park (1975). To what extent resource management systems were in fact 'indigenous' as opposed to 'traditional' was an issue raised by Bob Fisher (Gilmour and Fisher 1991) to discuss the state's coercive imposition of forest regulations via village headmen since the nineteenth century. Posing this kind of question prompts us to reflect on history, and ask from what social sources and dynamics of legitimation resource management systems have emerged. The problem of such an approach, though, is that it entails separating out practices, institutions, and roles as either internally generated and externally imposed, that have come to be collectively constitutive of hybrid contemporary regimes of environmental and political habitus.

For many years the spectre of overwhelming population growth sidelined consideration of the value indigenous knowledge could hold for development in Nepal. The urgency the issue assumed has far from disappeared, but since the late 1980s serious attempts have been made to contextualise population pressure on resources in terms of environmental justice and analysis of development policy (Blaikie & Brookfield 1987, Shrestha and Conway 1996). The extreme demographic stress on hill environments predicted in the 1970s has not materialised, and the growth of urban centres in Nepal as well as increasing patterns of out-migration to lowland Nepal, India, the Gulf and elsewhere have even reduced production intensity on hill forests in some areas. Macfarlane's (2001) brief reappraisal of demographic patterns in the village of his

original study (1976), a formative text for much development policy of the time, is a sharp reminder of the danger of relying on simple Malthusian algebra for understanding processes of social, economic and environmental change. The population of Macfarlane's village did double in size by a generation later, but half of them moved out. Many of Nepal's hill villagers have moved down to the lowland Terai where, with varying entitlements to land, they have competed with commercial logging and biodiversity protected areas for access to forest margins in a more desperate struggle for land than has generally been apparent in the hills (Ghimire 1992). [1] Shrestha and Conway's study places concerns with population growth in the context of the kinds of knowledge produced under development governmentality in Nepal, which fail to attend to the distinctive peasant ecology politics of Nepal's rural population, see Shrestha and Conway (1996).

There is, in summary, no great clarity about who is indigenous in Nepal (but much active dispute), and there is no easily identifiable way of life or knowledge practice that can be claimed as distinctively indigenous over others. The experience of rural development in Nepal has been characterised by a gradual process of learning to appreciate local knowledge in the face of failure of state directed and technologically driven formulas to relieve poverty and control population increase.

Knowing Differently

In this section I try to develop an analysis of local knowledge that does not rely on the indigenous as a privileged retrojection of coherent authenticity back in time, but that gives the term 'indigenous' a perhaps surprising flexibility for attending to contesting positions of authority about knowledge and effect in the world. In terms of official census statistics the north-central district of Rasuwa, that extends up the Trisuli Valley to the border with Tibet, is virtually mono-ethnic with some 80% of its population registered as Tamang. This apparent cultural unity gives way to an internally diverse society when viewed locally. It is the coexistence of different clan identities that gives life to its

communities. The incorporation of difference is expressed not in the containing endogamy of Hindu castes but in the affinal exchange of exogamous clans (bearing Tibetan derived names). Each person is made of father's bone and mother's flesh. Beef-eaters marry non-beef-eaters[4]. Buddhist lamas both contend with and complement the ritual specialisms of shamans (*bombo*) and territorial sacrificers (*lhaben*). Lamas from higher villages are considered better than those from one's own place. Lower villages grow more crops than higher villages that keep more animals. Women prefer to marry into higher up communities with healthy forests, where there will be less fodder-carrying labour for them. Potatoes from higher up make better planting tubers. Brewing yeast from lower down is more active. Products from higher locales are exchanged to mutual advantage with those from lower[5].

These differences are not however always negotiated into happy resolutions of opposites. Tamang oral histories speak equally of conflict, combat over pasture disputes, and even warfare between intermarrying groups. But knowledge itself is regarded as one of the key areas in which differences can be best maintained. The original sacred knowledge of the world is said to have been given to two brothers in the form of books. The younger brother ate his book and became a shaman (*bombo*), speaking truth through memorised, embodied, improvised, and possessed inspiration from within. The older brother kept his book and became a lama with knowledge of the intrinsically powerful texts of the Buddha *dharma*, free from performative adulteration. The unresolved struggle between oral and literate knowledge is a defining feature of the Tamang propensity for difference. In practice, the two systems of truth co-exist as complementary to each other, rather than fighting to exert dominance. The differences are maintained by musical and ritual markers, and once initiated to become one type of specialist, a man will risk losing his mind if he dabbles in the other system. Certain types of ritual knowledge are considered inherently potent, and as they are frequently to do with unseen ghostly

[4] The children follow the dietary taboos of the father's clan.

[5] Before roughly 1950 the main vertical expression of exchange value was salt for rice. The higher you went the more salt, the lower the more rice in the ratio of barter.

presences affecting our lives and bodies, they come with severe cultural health warnings. For instance, I was frequently warned off learning about curing chants as, without specialist initiation, the utterance of the words themselves was considered by lay villagers likely to make me blind.

Knowledge is appreciated as positioned and embodied. Women of certain villages have specialist knowledges of seed sowing, hat-making, yak-keeping, singing and so on. Men enjoy talking of the skills they have observed in other villages - for instance of styles of bamboo weaving, and dancing, or of activities they may have little familiarity with such as fishing. This need not mean they want to learn and adopt different knowledge. Knowledge of how others do things differently is as it were considered valuable in itself as a practice of reflection.

When development in Rasuwa District is considered, the differences of knowledge are again kept apart. The somewhat phantasmic arrival by helicopter of hundreds of apple trees to several villages about twenty years ago is illustrative. Villagers planted them as instructed but orchard maintenance and protection demanded a continuous settled presence contrary to the transhumant, agro-pastoral practices of shifting altitudinal residences and cultivation geared to vertically extensive subsistence. Fruit production, and horticultural specialisation (also promoted by development agencies) depend on a model of settled intensive farming. For lack of protection, it was not long before most of the apple trees had been destroyed by wild animals and domestic livestock. In contrast to settled intensive farming local livelihood security requires the movement of people and livestock up and down the mountainsides according to the availability of fodder, the characteristics of herd composition, the cultivation requirements of diverse crops at different elevations, and the benefits of coordinating economic and residential activities with those of other people with whom cooperation is pleasant and productive. Strategic skills, especially of gender sensitivity, are needed to

maintain relations of sociability among a variety of economically interdependent clusters of herd encampments over the transhumant agro-pastoral year.

People recognise that more settled and labour intensive forms of agriculture may give increased yields, but interviews with villagers revealed that the extra manure required to increase soil fertility would work against animal health being maintained by moving beasts to different locations with a diversity of seasonal fodder species. Fodder plants are thereby better able to regenerate over the year. The alternative of using inorganic urea fertiliser has been tried by the slightly wealthier farmers, but it is seen as expensive as well as making the soil compact and difficult to work with the mattock-hoe.

The only form of development that has successfully built on indigenous knowledge of transhumant agro-pastoralism in the district is production of the famous 'yak' cheese for the tourism industry. The milch animals involved are hybrids of varying yak-cow parentage, combining altitudinal hardiness with lactational yield, and the various herding demands of the different animals put the Tamangs' ecological skills and management resourcefulness to the test. Cooperative herding arrangements add essential flexibility to household labour dynamics. The cheese factory is itself attuned to transhumant herding, as it has a mobile dairy unit that keeps close to the main concentrations of animals in the productive summer monsoon months, transporting curds back to the central unit at Shing Gombo. Cheese production is, though, at odds with many of the goals of the national park.

In sum the local knowledge of the Tamang speakers of Rasuwa is principally about living in places and communities of difference. They live between high and low altitudes, between upward and downward transhumance, between wet monsoon and dry winter, and between the vegetational poles of juniper and palm trees. Extensive movement, rather than settled intensification, is the indigenous model of productive dwelling. They live at the conjuncture of influences that they call in ritual language being

"of the middle ground" (*bar ki sa la*), that is between the historical centres of literate power in Kathmandu and Kyirong (the nearest Tibetan town).

Indigenous knowledge and biodiversity conservation

In 1976 the eastern side of the Trisuli Valley of Rasuwa District became part of the Langtang National Park, with immediate and long-term effects on local environmental practice. The park prohibited slash-and-burn cultivations, pasture management by burning, hunting for the control of crop-damaging wildlife, and unlicenced collection for use of any forest products. At this time there was no interest among conservation administrators for indigenous knowledge of the plants and animals that they saw as under threat from local villagers. The translation of nature conservation policy into everyday institutional practices of employment categories such as park rangers and game scouts, very few of whom were recruited from the local population, resulted in an interface with villagers based on evasion and entrapment. Legitimate domestic use of timber for house building was regulated by a system of licence purchasing. The high cost of licences for roof shingles made from fir trees (abies spectabilis) has led to increased use of corrugated tin, and the licence costs for the production of paper from daphne bark has meant this handicraft technology has been abandoned. Bamboo is an essential product that no farming family can do without, for mats, baskets, tethers, and rain-shields. Licences are annually procured for as many bamboo poles as a man can carry at one time, though these stocks are regularly supplemented over the year by further unlicensed and unseen collections. The park system is perceived as to do with regulation, licensing, and income generation. The enormous amount, as locals consider it, of 1,000 rupees (£10, or more than a manual worker's monthly income) is charged to each tourist for park entry.

The objectives of biodiversity conservation are simply not perceived in the interaction between park officials and villagers. It is predominantly a regime of control and punishment. Days of incarceration and negotiation of fines follow accusations of unlicensed timber collection or killing an animal such as a bear. At the same time park officials are very rarely encountered outside their offices or elsewhere than on main paths

and the road to the headquarters at Dhunche. In all my many journeys through the forests of Rasuwa District, I only once met with park officials off the beaten track when a group of them were checking for unlicensed herders in high summer pastures around the cheese factory. Their dealings with these herders were frequently threatening and insulting till placatory offerings of milk or yoghurt were made, and much of the park officials' trip was spent playing cards by the firesides in herders' shelters. I questioned these officials about some of the vegetation we passed along the trails, and it was clear they had far less botanical knowledge than the villagers in the group. The park itself has no active conservation science programme, and keeps no records of important biodiversity phenomena such as the flowering of stands of different bamboo species. Villagers by contrast have good memory of these events for the six bamboo species present in the region. It has to be said in fairness that not all park officials are regarded with trepidation and disdain. There are some who show respect and compassion. The park warden at the end of the 1980s was even feted as "a friend of the poor" for making clear to his staff that villagers did have the right to collect dead firewood for domestic use. His wife, who often wore a fur coat, was also much admired.

One of the arguments for taking an interest in indigenous knowledge of biodiversity, advocated increasingly since the 1980s under labels like 'participatory conservation', is that local or indigenous peoples have traditional concepts of oneness with the environment, or of "kinship with the natural world" (Ramble and Chapagain 1990:27) valuable for the goals of conservation (Müller-Böker 1995, Hay-Edie 2001). Indeed, Tamang notions of human selfhood are not radically separated off from those of other species. Clan identities in particular are seen as like natural kinds in that they bestow on their members intrinsic bone substance, but they are not species in the Western scientific sense, as they depend on making relationships with other kinds for the flesh of their reproduction. Relations between inter-marrying clans are compared to struggles between beasts (Campbell 2000) and even between the contrastive social habits of trees (Campbell 1998).

I would see a genuine indigenous knowledge of biodiversity as one that understands the range of ways in which natural species figure as both useful and

meaningful to people. Tamang discourses of animal life invoke a common field of struggle between willful agents that spills over into human relations. There is a 'phenomenological unity' (as Viveiros de Castro (1998) has written of Amerindian 'perspectivism'), across the animal-human divide, and stories of animal exploits play with interpretive exchange between animal and human characteristics. The intimacy of dwelling in such close dependence on an environment with a host of animal and plant species that provide frequent occasion for grief (e.g. crop and livestock damage, personal injury from bears, falling from trees while cutting fodder, the maddening inescapability of monsoon leeches) and joy (e.g. the pleasure of high-quality wild foods, the delight of floristic abundance celebrated in myths of cosmogenesis) is an ontology of bio-diverse connection incommensurable with modernist conservation's dichotomy of nature and society. Relating the politics of wildlife within a protected area to local cultural understandings of animals and their frequently bothersome misbehaviours raises awkward questions for advocates of the incorporation of indigenous knowledge into conservation projects. For the residents of the Langtang National Park, wildlife such as bears, wild boars, deer, monkeys, porcupines, jackals, and leopards are considered pesky gluttons of human crops and livestock. If the local perception of wildlife is as pests, a cosy image of cuddly animal lovers cannot be sustained, and in terms of the sorts of indigenous knowledge which conservation agencies are apt to pay attention to, it has to be questioned how much indulgence can be expected from non-anthropologically inclined administrators of protected areas towards such manifestly non-modern and non-conservationist natural symbolism[6].

Arjun Agrawal (1995) has forcefully argued that indigenous knowledge cannot be easily abstracted from the embedded contexts of use and meaning in which it applies, to then be used for instrumentalist development project purposes. Nor can it be reduced to a compilation of 'common sense' knowledge. During an interview I made in one of the Tamangs' mobile animal shelters, some indigenous knowledge of biodiversity was being

[6] For a recent review of anthropological treatments of people-wildlife conflicts see Knight (2000). Community Conservation and its problems for implementation in African contexts are discussed by Adams and Hulme (1998) and more generally by Ghimire and Pimbert (1998).

put to use. A very pregnant buffalo had fallen and broken a leg, not an uncommon problem in this northern extent of hill-buffalo keeping. The owner's initial idea was to kill it for meat, but he was told (by a kinsman holding village political office and afraid of law-enforcers hearing about such incidents) that it is illegal to kill a pregnant buffalo in Nepal. The man had put a large saucepan on the fire, containing leaves, twigs and bark. I asked him what they were for. It was medicine for the sick buffalo he replied. When I asked about the specific plants contained in the saucepan he mentioned a story that once a man and his *mha* (sister's husband) went hunting but quarrelled after they had got their prey. They forgot about the meat which they had cut in pieces. The next day they remembered and found the meat had joined up together again. They realised the plants they had wrapped it in must be medicine. I discussed the scene later with another local friend wondering whether this medicine was known to him too. His comment was sceptical but open-minded; it could be nonsense or it could be true he told me. This medicine myth is fairly typical locally in its interplay of plant, animal and human action. It says something about Tamang understandings of the relationship between substance, conflict and knowledge, in a kind of indigenous material dialectics. It is an example of how Tamangs see struggle and contest leading to transformation, enabling new contexts for the mixture of substances to have effect. In this case the time elapsed due to the fight between affines allowed the combination of different plants to work their magic.

Whether such stories or even their tellers are listened to depends on the politics of environmental knowledge. This indigenous knowledge confronts an overall context that is not conducive to favourable 'conditions of listening' (Burghart 1996). In Nepal families with the money to do so are sending their children to English medium boarding schools to distance the next generation as much as possible from village based superstition, poverty and reliance on fields and forests for their livelihoods. Power is seen to come from science, commerce and office work, not from living close to nature (Pigg 1992). Oral knowledge in particular carries no prestige. When on different occasions I discussed my research with non-villagers (NGO workers, officials, teachers) as being to do with 'local knowledge' (which I translated into Nepali as *isthaniya bigyan* 'knowledge

of place'), if they did not treat me with condescending incredulity they advised me to study the knowledge of the Buddhist lamas who, it was emphasised each time, at least had books to learn from. The distancing of oral from literate knowledge, of superstition from science, and of peasant from office worker, are markers of social power that work against the élite entertaining respect for local knowledge. The idea that scientific knowledge of environmental degradation justifies regulation of peasants' use of resources in regimes of nature conservation only increases the gulf between these contrasts of power and associated knowledge.

The storyline of nature as threatened by local people has powerful listening constituencies, especially in the alliance between international environmentalists and national park authorities in Third World states[7]. While indigenous knowledge of biodiversity is claimed to be an avenue for hearing the voice of local people who have interests in protected areas (Stevens 1997), it is a rather instrumentalised version of knowledge that is presented to environmentalists and policy makers, often in the form of lists of useful plants. If on the other hand indigenous knowledge of biodiversity is to reflect genuine cultural perceptions as anthropologists would want to explore in the round, then unfortunately for the Tamang their own mythological rather than scientific points of reference, and their antipathy to crop pests are unlikely to attract sympathy from conservationists. In the round, however, there are many ways that plants and animals are seen as vital to human life, health and proper sociality. The 'potato-thief' porcupine's quills and the Tibetan antelope's horn are essential items of shamanic curing technology, for example, and children are encouraged to adopt as pets fledgling birds fallen from nests to learn nurturing instincts. The point is that relations between species (as between clans, and castes) are characterised by engagement with diversity, manifested in a range of relationships from dependence to dispute and difficulty. The Tamang make this

[7] The idea that local peasant ignorance and population growth were directly responsible for Himalayan ecological degradation was effectively demonstrated to be largely mythological by the end of the 1980s (Ives and Messerli 1989), but of course it is a persistent myth.

explicit through the course of life events, in contrast to the dis-engaged, de-socialised vision of nature held by conservationists.

The control over nature by the park authorities is for the most part a claim rather than a reality. The lack of adequate resourcing and poorly motivated staff keep the level of environmental surveillance to one of periodic rituals of enforcement, which assert the political relations of hierarchy between the park officials and villagers. But beyond the matter of staffing constraints in a difficult terrain, from the villagers' point of view there is another sense in which the park authorities' claim to control is flawed. This relates to local knowledge of ritual environmental legitimacy. Occasional visits by official government hunters are made for the purpose of keeping the wild boar numbers under control. They only manage to kill a few beasts at most, and leave the villagers disappointed. A young man explained why he thought the hunters were unsuccessful. He said the boars were protected by the territorial guardian of wildlife, *shyibda* (Lord of the Soil). It was as if the hunters as outsiders do not have the adequate ritual connections for permission to kill the boars. This perceived lack of adequate connectedness to the local sacred environment on the part of the park authorities underlines the problem of lack of understanding in the relationship with the local communities. The authority of the park is legitimated by the state and Western financial donors to conservation, and is enforced by the military. But it has till now little consensual participation.

How can I claim that the issues I have mentioned of ritually legitimised hunting success, and myths of medicines discovered through fighting in-laws can honestly further our understanding of indigenous knowledge of biodiversity? Hard-nosed environmental agenda-setters would presumably be dismissive, and say that what are needed are forms of knowledge that can advance the comparison of quantitative scientific indicators of changing biodiversity, such as changing percentages of forest canopy cover, and numbers of red pandas breeding. But that would be to relinqish the setting of the agenda to 'eco-crats' (Sachs 1993). Jane Guyer and Paul Richards (1996) have written about this problem in Africa, and asked how can the concept of biodiversity be framed to African needs and

perspectives? They mention that it is rural communities who are often the direct custodians of biodiversity, despite what states and international agencies may think. What happens when the issue of custodianship is put on the agenda for the development of conservation policy? What can be learnt ethnographically from attempts at indigenous participation in power?

Buffer Zones

The Langtang National Park was one of the first protected areas established in Nepal. The conception of the park was broadly that of the 'Yellowstone model' advocating minimum human interference within its borders. Yet Langtang is one of the most heavily populated of the parks in Nepal, and villagers were accustomed to, indeed depended on, exchanging and bartering forest produce for lowlanders' grain to help make up the average household's annual six month grain deficit. The impact of park regulations on this exchange has been hard on villagers' subsistence. A local elder statesman, who had defended the principle of the park since its inception, pointed out to me that the villagers had from the beginning only perceived the inconveniences of park regulations on their subsistence activities of wood and fodder collection, rather than appreciating the advantages such as the restriction of outsiders from using village forest resources. A revamping of the minimal human interference principle was initiated in Nepalese parks by the mid-1990s, through the buffer zone concept, piloted in Africa (Stevens 1997:55), and was intended to give park residents legitimate access to specified areas for limited subsistence needs.

In November 1997 I visited a project intended to introduce the buffer zone principle in demonstration plots in two adjacent villages in Langtang National Park. The park had agreed to let an NGO organise the demarcation with stone walls of two sites of about one hectare each, for planting tree crops and some vegetables for the benefit of the village demonstration plot committees. However, rather than plant valued tree and plant species occurring locally such as bamboos, walnut, and wild fruit and fodder trees, the

project planted mostly exotic species such as citrus. Though the villagers had been paid wages for constructing the walls, it was evident that weeding had been unsatisfactory since the plantings. Domestic livestock had also broken through the walls several times, and the plots looked as though they had received minimal attention. Discussing the situation with the NGO worker and villagers, it emerged that the villagers were primarily interested in securing as much money as possible from the NGO. They did not see the plots as meaningfully belonging to them because the park authorities had refused to discuss the villagers' main agenda, which was whether the land title to the plots would be granted back to them. Without assured ownership they considered looking after the plots a very low priority in their expenditure of time and effort, and thought the park would probably reclaim the areas after the short lifetime of the NGO's involvement. So long as some money was coming in through the project, a certain level of participation could be expected, but Tamang understandings of reciprocal advantage are far more complex and distinctive than the word 'participation' can conjure up (Campbell 1994). Standard Nepali expressions for local participation have come to be known as synonymous with unpaid, exploitative, 'voluntary' labour, evoking memories of the corvée labour system of taxation (nep. *rakam*) abused by national and local autocratic regimes in the past, as well as more recent projects to improve tourism by having villagers clean up paths and dig ditches for no immediate reward.

Visiting the Department of National Parks in the capital to enquire about the further development of the buffer zone concept for villages inside the Langtang National Park boundaries, I saw a map indicating where the buffer zone was to be. It merely covered the southern boundary of the park, and was therefore of relevance to communities outside and adjacent to the park, but ignored completely the residents inside. The model of a buffer boundary had simply been transposed from the parks in the plains area (Terai) of Nepal (specifically Chitwan and Bardia) where strict human exclusion had been instituted (Müller-Böker 1995). The map showed no appreciation of the complex transhumant use of mountain forests and pastures in seasonal movements between different altitudes, and the actual interactions of park residents with varied habitats and

species. A further component of the buffer zone policy is to promise a share of 30%-50% of park income for distribution to villages that arrange to have committees and 'development plans'. The theory of participation with indigenous practice thus ends up presenting itself as an unconditional demand to follow prescribed designs for community organisation.

With the park unlikely ever to cede land title over forest areas used by villagers (the park warden refused to countenance such an event in 1997), or to match the concepts of buffer zone and the complementary idea of 'facility zone', to the range of sites actually used by the villagers, it seems that a conflict will continue between conservationist boundary maintenance of where nature and society should find their proper places, and the everyday and largely unseen practices of local people's procurements. As McNeely points out "By...establishing national parks that have no management, the authority of governments tends to be spurious. While many governments have claimed power over resources, they lacked the capacity to implement their responsibilities, thereby creating among indigenous peoples a lack of confidence in the capacity of either state or local institutions to regulate access to local resources" (McNeely 1997:178-9). Although the concept of buffer zone appears to invite indigenous participation to regulate resource use, it does so in a manner that requires adopting bureaucratic, committee-based procedures alien to Tamang practices of political dialogue, accountability, and dispute settlement. Indeed the establishment of national parks into remote areas has been interpreted as just such a mechanism for extending a more 'national' governmental culture into areas marked by ethnic difference from the centre (Seeland n.d.). Deeply ingrained, historical tactics of defensive recalcitrance toward central officialdom and symbolic hierarchies have been core to the persistence of indigenous vitality for the Tamang, that Holmberg (1996) characterises as a relation of cultural 'involution' against the Hindu state[8]. For

[8] Contrasting with this argument I make about the Tamang, markedly different cultural strategies of more engaged participation with central religious and political practices are noticable for instance in accounts such as Marie Lecomte-Tilouine's of the Magar in west central Nepal: "L'hindouisme s'est donc présenté aux Magar...comme une condition nécessaire au pouvoir politique" (1993: 319).

policies of environmental mangement not to acknowledge this historical and cultural analysis is perhaps not surprising, but it provides a context for understanding uncooperative responses to 'participatory' initiatives.

The villagers' insistence on land title for the buffer zone demonstration plot, their continued practices of 'illegal' forest produce procurement, and cynicism towards offers and demands of 'participation', stem equally from the villagers' inability to handle bureaucratic process as a mechanism for their own collective strategic advantage, and the structural inability of the park authority to meet the villagers within the terms of indigenous dialogues of environmental power relations. During my fieldwork, these indigenous dialogues of power commonly took the form of notions of hunting rights and pasture use being ritually legitimised by offerings to local territorial deities, but it has to be said that more clearly political avenues for mediating community-state environmental relations had been rendered ineffective by two factors; the establishment of the park itself and the introduction of multi-party politics since 1990.

Prior to the existence of the park, village headmen (*mukhiya*) derived their authority not only from conferal of office by local district bodies, but fundamentally from their ability to coordinate village livestock movements, and to negotiate terms of pasture and forest product use by community outsiders. These headmen ensured that outsider livestock herders paid pasture fees in the form of young goats that were sacrificed in late spring and shared equally among all village households. They defended territorial boundaries from encroachment by cattle- and sheep-raiders of neighbouring communities, and declared the opening and closing of access for villagers themselves to summer and winter forest pastures, and to the open-field system after crop harvesting. When the whole context for these functions of environmental regulation were replaced by the park system, the pivotal role of the headman in managing key aspects of village productive economy was rendered impotent. Further destabilisation of village authority structures occured with the introduction of competitive multi-party politics, and its consequences of a more

individualistic pursuit of agro-pastoral strategies. Factional squabbles in this transitional period resulted in the occasional reporting of individuals for infringements of park regulations for directly political motives, though by 1998 I was told villagers had agreed upon a policy of collective silence regarding park infringements. There was not, though, much consensual basis for a proactive negotiation with park authorities on issues like compensation for crop damage by wild animals or the formation of a village management plan committee.

The story is similar in many ways to the situation recorded by Stevens (1993) of the effects of the creation of the Sagarmatha national park in the Everest region, where Sherpas' local resource use institutions were circumvented by park regulations. While locally accountable, though not necessarily 'sustainable', systems of control had been displaced, the park system was ineffective in applying its mandate of forest protection. Stevens argues that many of the Sherpa resource practices were not indigenous in the sense of being generated independently of state agency, but the point is they were familiar, and the park's blanket approach to protection was clearly insensitive to the Sherpas' own localised practices of strict protection in specified areas. Stevens mentions the cases of four villages where the institution of *shinggi nawa* was revived as a more effective means of local forest protection than the infrequent park patrols provided. His assessment is that future disagreements in resource management will continue as the park holds different goals from the locals. He says "it may have been wiser to build on local management institutions to begin with rather than to undermine them for nearly twenty years and then attempt to reverse direction" (ibid: 326). He suggests coercive forest protection does not help win over support for conservation ideals in the long term.

Conclusion

Whether indigenous knowledge, as I have attempted to characterize it can be taken on board as relevant to nature conservation by institutions such as the Langtang

national park is doubtful. Internal Tamang discourses of power involve engagement with explicit social difference through Dravidian models of group alliance, with principles of mythologically derived creative conflict, and with dialogues across natural types. The trouble is that the park in-comers have little desire to enter the danger-zone of negotiating mutual identities bilaterally. Their authority derives precisely from originating outside the indigenous model of isogamous bilateral exchange. Perhaps when the identities and agents involved in human-environmental interaction are recognised as legitimately conflictual the debate over biodiversity can truly begin, and this will start from the basis of desire for mutual relationships between different qualities of nature. The Tamangs of the Langtang National Park are not familiar with the scientific discourse on nature conservation, and so are unable to engage conceptually with the issues raised. What they do have is an ecology of self that celebrates engagement with natural difference, which arguably resonates far more with Himalayan biodiversity than an imposed categorical distancing of society from nature, and they have an explicit language for problematising the basis of participation, reciprocity and legitimate hierarchy in society.

The Tamangs' 'indigenous' symbolic and practical phenomenological unity between humans, territory, and species diversity runs counter to the primary feature of the environmentalist world view, which is that global biodiversity can only be saved by formalising boundaries between humanity and non-human nature (Descola 1996). 'Nature', as ascribed by Protected Area status, constitutes an unpromising project for participation because of the disruption it does to patterns of socio-biotic connection, exchange and reciprocity, or 'mediation' (Latour 1993) in lived worlds. Productive engagement with and modification of processes of growth and species interaction constitute a fundamental subsistence ontology of belonging and agency for montane agro-pastoralists. Conservation and development projects have failed to address the fundamental vertical transhumance framework of indigenous knowledge in the Langtang national park, except for the case of the cheese factory. Regulations that prohibit the deployment of local knowledge in managing dispersed village/forest/pasture boundary ecologies in the interest of protection destabilise the fragile viability of marginal

livelihoods, the coherence of community-based leadership structures, **and** the hold people have on an understanding of the world that they do not see as polarised between nature and society.

Advocating participation with local communities in biodiversity conservation needs to address the extent to which local people's environmental agency is being challenged in the process. The example of the park buffer zone trial indicates that participatory approaches can throw up issues of profound power differences in even establishing what there is to participate about, and lack of clarity about the possible outcomes of participation, which cannot be easily side-stepped. Arun Agrawal's thoughtful contribution to the discussion on indigenous knowledge makes similar points: "advocates of indigenous knowledge seldom emphasise that significant shifts in existing power relationships are crucial to development" (1995: 416). And further: "It might be more helpful to frame the issue as one that requires modifications in political relationships that govern interactions between indigenous or marginalised populations, and elites or state formations" (1995: 431). 'Equitable negotiation' (Sillitoe 1998:206) would indeed be the demand made by the residents of the national park, but belligerent non-cooperation is the more likely response as long as the terms of participation are not extended to include security of benefits beyond the lifetime of all-too-brief provisional projects experimenting in participation, and the conditions of participation – enforced bureaucratisation of village political process – skew the terms of dialogue away from indigenous negotiating practices.

Escobar has expressed scepticism about the appropriation of local knowledge of biodiversity. "Modern biology is beginning to find local knowledge systems to be useful complements. In these discourses, however, knowledge is seen as something that exists in the "minds" of individual persons (shamans, sages, elders) about external "objects" (plants, species), the medical or economic "utility" of which their bearers are supposed to "transmit" to the modern experts. Local knowledge is not seen as a complex cultural

construction, involving not objects but movements and events that are profoundly historical and relational" (1995:204). I have tried to show how understanding the wholly different ways such knowledge connects to social and cultural fields, beyond what the codification of science implies, is in fact well served by ethnographic investigation of the notion of participation itself. 'Whose knowledge?' and 'whose participation?' are questions that lead beyond development methodology to a critical analysis of people's ability to understand their livelihoods, their environments, and their dialogue within relationships of power to others.

Within current nature protection debates, there is something of a backlash against incorporating indigenous knowledge and local community interests into conservation programmes. Wilshusen *et al* (forthcoming) note that 'new protectionists' advocating a return to strict enforcement and abandonment of conservation-with-development approaches criticise participatory initiatives for their practical ineffectiveness, and for reasons of idealised projections of local people living in eco-harmony. The new protectionists argue against linking local interests to conservation because of the internal divisions of communities, their poor organisation, and the absence of anything approximating to a conservation ethos. As a consequence it is asserted there can be no expectation of local people acting to further the goals of biodiversity protection. Recognition by the new protectionists of problems with participatatory approaches can be seen to concur with much of the evidence presented here, yet the conclusions drawn are wholly different. I suggest the terms for genuine participation have hardly been glimpsed, let alone put in place.

At the other end of the debate is the position of certain development practitioners whose experience of participation as a new development orthodoxy has given cause for scepticism (Cooke & Kothari 2001). Their analysis focuses on the limits of reflexive critique within participatory frameworks, tendencies for political co-option of the local, and "continued centralization in the name of decentralization" (2001:7). They suggest the

language of empowerment masks actual objectives of managerial efficiency, including transfering project costs onto beneficiaries. Mosse's contribution in the volume looks in particular at how local knowledge ends up not modifying project models but becomes articulated by them. In a Western India participatory farming systems project "[v]illages became easily incorporated into programme work as low-status project employees, foremen, wage-labourers, and above all as clients of the project and its field-level representatives, rather than as development partners making their own investment decisions" (2001:26). Indigenous knowledge then had little effect on the project, and Mosse argues farmers instead learnt to manipulate 'participation' as a new form of 'planning knowledge' (ibid:44). If this example seems simply to reinstate rather than challenge existing expectations of dependence on patronage, Uma Kothari's contribution suggests that participatory method 'purifies' or normalises power into forms of self-surveillance and consensus, that do not acknowledge the circulation of power in chains, or the possibility of subverting and disrupting the participatory discourse. Her argument highlights the problem of dealing with 'messy' aspects of people's lives that do not fit into compartmentalised participatory toolboxes. Thus, "difference will register as deviance" (2001:148), though she offers a more positive view of circumstances that perhaps approximate to the Tamangs' response to the buffer zone: "exclusion can be empowering and even necessary in order to challenge existing structures of domination and control" (ibid:151).

Participatory approaches to development are being attacked from many sides. This is probably healthy. It does matter that anthropological inflexions have become noticeable in changing conceptions of development policy, particularly regarding the characteristic of wanting to know how the world is perceived from non-dominant positions. Yet, how anthropologists' insights of these positions can be translated into strategies for intervention requires intense scrutiny. Much is lost in the translation, especially the indigenous celebration of differences that give meaning and pleasure in life. To extend this chapter's opening analogy between the commodification of authentic-sounding indigenous music and that of indigenous knowledge in development, it is noteworthy that

the Tamangs' idea of musical celebration usually entails a simultaneous performance by multiple groups of religious specialists and dancing circles of villagers in a collective cacophony of different beats and voices. To record these groups separately would produce marketable works of culturally recognisable forms, but the quality of the live event with its community of participating sounds moving in an out of discordance would be entirely lost.

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